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EC-Material Safety Data Sheet according to 2001/58/EG
EC Date..... : 20 Sep 06
Release..... : 06.1

388 inert gas wave solder flux, halide free

1/4

1. IDENTIFICATION OF THE PRODUCT and OF THE ENTERPRISE

Chemical name: Synthetic soldering flux

Manufacturer	Cobar Europe BV PO Box 3251 4800 DG Breda Holland	Agent	
Emergency	phone : +31 (0)76 544 5566 fax..... : +31 (0)76 544 5577	Emergency	phone : fax..... :

2. INFORMATION ON INGREDIENTS/COMPOSITION

Ingredients	Classification	Weight %	CAS-No	TLV-value
2-propanol	F; R11	89-83	67-63-0	400 ppm
Ethyl alcohol	F;R11	8-15	64-17-5	1000 ppm
Carboxylic acid		< 1.0	124-04-9	No TLV established

3. HAZARDS IDENTIFICATION

Most important hazards	R11: highly flammable.
Eyes	A high concentration of liquid, mist, or vapor may cause irritation of the connective tissue.
Skin	Repeatedly or continuous contact may decrease the skin, that may lead to irritation and allergies. Absorption of harmful substances is unlikely.
Choking	Depression of the central nervous system. An occurring symptom is amongst others alcohol poisoning. Effects of overexposure may be: nausea, vomiting, tummy ache, dizziness, unconsciousness. Inhalation or vomiting may cause severe lung damage.
Inhalation	Irritation of nose, throat and lack of breath. Exposure to vapors at a high concentration may have same effect as with inhalation.

4. FIRST AID MEASURES

Eye contact	Flush with copious warm water for at least 15 minutes, with open eye. Call physician at once.
Skin contact	Flush with copious water for at least 15 minutes. Infected clothing must be washed in case of reuse. Consult physician in case of blisters appearing or if irritation persists.
Ingestion	Rinse mouth with water. Keep warm and calm. Administer oxygen when lack of breathing. Administer artificial respiration, restore breathing. DO NOT induce vomiting! Call physician at once.
Inhalation	Remove to fresh air. Administer oxygen if lack of breathing occurs. Keep warm and calm. Administer artificial respiration. Call physician at once.



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2/4

5. EXTINGUISHING MEASURES

Proper extinguishing media	Water, carbon dioxide, dry powder, foam.
Improper extinguishing media	Do not use jet of water.
Protective clothing	Wearing of appropriate protective masks.

6. MEASURES TO EXPOSURE OF THE PRODUCT

Personal precautions	Wearing of protective clothing. Inhalation protection. Extinguish all ignition sources.
Environmental precautions	Keep away from drains, surface-water, ground-water and soil.
Cleaning procedures	Absorb with sand and other diminishing material. Waste disposal could be done by incineration in furnace but should be delivered in proper containers.

7. HANDLING AND STORAGE

Handling	Use in well-ventilated areas; avoid breathing vapors. Keep containers closed when not in use.
Storage	Keep in cool, well-ventilated area away from heat or ignition source. This should be done in accordance with the applicable laws and regulations.

8. EXPOSURE CONTROLS/PERSONAL EXPOSURE

Control parameters	TLV-value 400 ppm maximum limit for 2-propanol.
Other regulations	VbF-class: B BAT-value: 50 mg/l Parameter: acetone.
Measures for technical control	Preference of technical measure to prevent or control contact with the product. Isolating process and personnel, mechanical ventilation (dilution and local exhaust) and the regulation of process conditions. In case of non-prevention or non-control, a proper protective wearing should be used.
Respiratory protection	In case of contact with high vapor concentrations.
Hand protection	Solvent-resistant gloves (butyl rubber).
Eye protection	Safety glasses with side-shields.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid
Color	whitish/colorless
Smell	alcoholic
Boiling point at °C	82
Melting point at °C	< -80
Flashpoint at °C	13
Inflammability limits (vol. % in air)	2.0 - 12.0
Solubility in water (mg/l)	slight
Vapor pressure at 50 °C [kPa]	35*
Vapor density (air = 1)	2.10*
Density at 20 °C	0.792
Inflammability	Classification according to EC-regulations "highly flammable"
Ignition temperature at °C	400*
Evaporation rate	2.2

* value for main component 2-propanol



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3/4

10. STABILITY AND REACTIVITY

Stability/reactivity	Stable product at normal conditions. Hydrolyses in presence of water, acids, bases.
Conditions to avoid	High temperatures.
Materials to avoid	Strong oxidizers.
Hazardous decomposition products	Not known.

11. TOXICOLOGICAL INFORMATION

All information refers to the main component 2-propanol.

Acute toxicity	LD50/oral/rat = 4700 - 5500 mg/kg. LC50/inhalation/rat = 46.5 mg/l/4h. LD50/skin/rabbit > 12800 mg/kg.
Specific effects	Not carcinogenic. Not mutagenic: tested with salmonella typhimurium egg cells at guinea pigs.

12. ECOLOGICAL INFORMATION

All information refers to the main component 2-propanol.

Mobility	The product is volatile/gaseous and will be separated in gaseous condition.
Degradability	The product is slightly biodegradable BOD20 = >78% of ThOD. The product is proved to be biodegradable under anaerobic conditions.
Bioaccumulation	Not likely.
Ecotoxicity	EC50/24h/Daphnia = 9714 mg/l. LC50/96h/Fish = 1000 mg/l. EC50/24h/Algae = 1800 mg/l.
Reference to BlmSchV	TA-air class: III Alkylalcohols with appendix E of the TA-air.
Hazard classification	WGK 1. According to catalogue maritime hazard classification.

13. DISPOSAL CONSIDERATIONS

Product	Waste disposal could be done by incineration in furnace in accordance with the applicable laws, and regulations.
Hazardous waste number	14.03.03. Since regulations vary, consult applicable regulations, or authorities before disposal.

14. TRANSPORT INFORMATION

UN number	UN-1987
ADR/RID class	3
ADR packaging group	II
ADR/RID	33
GGVS/GGVE	Identifications similar to ADR/RID
IMDG-packaging group	II
IMDG-class	3
IMDG-Marine pollutant	no
IMDG-EmS number	3-06
IMDG-MFAG-table number	305
IATA packaging group	II
IATA class	3
GGVS	Identifications similar to IMDG



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4/4

15. REGULATORY INFORMATION

Physical/chemical indication	Highly flammable; symbol: F irritating Symbol: Xi.
Risk-phrase	R11: highly flammable R36/38: irritates eyes and skin.
Safety-phrases	S2: keep away from children. S7: keep containers well closed. S16: keep away from ignition source. Do not smoke.
EC appendix 1 classification	Highly flammable.
EC number in appendix 1	603-003-00-0.

16. OTHER INFORMATION

Further information	Instruction to staff according to Act Dangerous Goods, part 3, paragraph 14 and next.
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